

CLAIMS

- [c1] 1. A mobile switching center (MSC) configured for supporting wireless communication between a code division multiple access (CDMA) radio access network (RAN) and both a GSM core infrastructure and an IS-41 core infrastructure, comprising:
- a first circuit communicating with the CDMA RAN, the first circuit communicating with the IS-41 core infrastructure using IS-41 protocol; and
 - a second circuit communicating with the CDMA RAN, the second circuit communicating with the GSM core infrastructure using GSM protocol.
- [c2] 2. The MSC of Claim 1, wherein the first or second circuit is selected based on at least one message from a mobile station (MS).
- [c3] 3. The MSC of Claim 2, wherein the message is a location message.
- [c4] 4. The MSC of Claim 3, wherein the location message includes an international mobile subscriber identifier (IMSI).
- [c5] 5. The MSC of Claim 4, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription.
- [c6] 6. A state machine mobile switching center (MSC) configured for supporting wireless communication between a code division multiple access (CDMA) radio access network (RAN) and both a GSM core infrastructure and an IS-41 core infrastructure, comprising:
- a state machine selectively configurable to communicate with the IS-41 core infrastructure using IS-41 protocol or with the GSM core infrastructure using GSM protocol, based on at least one identifier received from at least one MS.
- [c7] 7. The MSC of Claim 6, wherein the identifier is included in at least one message from the MS.
- [c8] 8. The MSC of Claim 7, wherein the message is a location message.

- [c9] 9. The MSC of Claim 8, wherein the location message includes an international mobile subscriber identifier (IMSI).
- [c10] 10. The MSC of Claim 9, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription, the MSC configuring itself accordingly.
- [c11] 11. A communication system, comprising:
a CDMA RAN;
a GSM core infrastructure;
a CDMA core infrastructure; and
an MSC interconnecting the CDMA RAN with both infrastructures.
- [c12] 12. The system of Claim 11, wherein the MSC includes:
a first circuit communicating with the CDMA RAN and with the IS-41 core infrastructure using IS-41 protocol; and
a second circuit communicating with the CDMA RAN and with the GSM core infrastructure using GSM protocol.
- [c13] 13. The system of Claim 12, wherein the first or second circuit is selected based on at least one message from a mobile station (MS).
- [c14] 14. The system of Claim 13, wherein the message is a location message.
- [c15] 15. The system of Claim 14, wherein the location message includes an international mobile subscriber identifier (IMSI).
- [c16] 16. The system of Claim 15, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription.
- [c17] 17. The system of Claim 11, wherein the MSC is a state machine selectively configurable to communicate with the IS-41 core infrastructure using IS-41 protocol and with the GSM core infrastructure using GSM protocol, based on at least one identifier received from at least one MS.

[c18] 18. A method for effecting communication with a first wireless mobile station (MS) having a subscription in a GSM core infrastructure and with a second wireless MS having a subscription in a CDMA infrastructure without requiring either MS to have more than a single subscription, comprising:

receiving, at an MSC, at least one identifier from at least one MS;

based on the identifier, determining the core infrastructure in which the MS has a subscription;

undertaking, through the MSC, authentication with the MS using information from the core infrastructure in which the MS has a subscription; and

collecting accounting data using the core infrastructure in which the MS has a subscription.

[c19] 19. The method of Claim 18, wherein the receiving act is undertaken using a CDMA RAN.

[c20] 20. The method of Claim 18, wherein the identifier is an IMSI.

[c21] 21. The method of Claim 18, further comprising billing a user of an MS using the accounting data collected by the associated core infrastructure.

[c22] 22. The method of Claim 18, comprising, based on the determining act:
using GSM protocol in at least part of the authenticating act when the MS has a subscription in the GSM core infrastructure, and otherwise using IS-41 protocol in at least part of the authenticating act when the MS has a subscription in the CDMA core infrastructure.

[c23] 23. A mobile switching center for a wireless communication system, comprising:
means for receiving an identifier from an MS;
means for using the identifier to determine whether the MS has a subscription in a GSM core infrastructure or a CDMA core infrastructure; and
means for communicating with both core infrastructures.

- [c24] 24. A wireless mobile station (MS), comprising:
at least one storage device including an identifier;
at least one radio communicating the identifier to a CDMA radio access network (RAN);
and
one and only subscription in a GSM core infrastructure.
- [c25] 25. The MS of Claim 24, wherein the MS communicates with a mobile switching center (MSC) using the CDMA RAN and execute authentication with the GSM core infrastructure while the MS is located in an area serviced by a CDMA core infrastructure.
- [c26] 26. The MS of Claim 24, wherein the identifier is an international mobile subscriber identifier (IMSI).
- [c27] 27. The MS of Claim 26, wherein the MS sends the IMSI as part of a location update message.

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